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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,151	11/04/2005	Tilo Schaefer	588.1046	1403

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EXAMINER	
RIVELL, JOHN A	
ART UNIT	PAPER NUMBER
3753	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/534,151	SCHAEFER ET AL.	
	Examiner	Art Unit	
	JOHN RIVELL	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/4/05 (application)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05052005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

By preliminary amendment filed May 5, 2005, claims 1-13 have been canceled in favor of new added claims 14-28, which are now pending.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "permeable seal" of claim 25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 provides for the use of the "compressor" in a motor vehicle air conditioning system, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 27 is also rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-16, 18 and 20 are rejected under 35 U.S.C. §102 (b) as being anticipated by Albertson et al. (U. S. Pat. No. 5,577,389).

The patent to Albertson et al. discloses a "compressor, comprising: a safety device (shown in general in figures 1 and 2 at 9) for limiting high pressure, wherein the safety device is hermetically sealed (by rupture disk 17) until a first response (at which disk 17 ruptures), and wherein the safety device allows a slow release of system pressure after the first response" by releasing of pressure through spring biased closed relief valve 27, as recited in claim 14.

Regarding claim 15, in Albertson et al., "the safety device (9) includes a rupture disk (17) and a pressure relief valve (27)" as recited.

Regarding claim 16, in Albertson et al., "the rupture disk (17) and the pressure relief valve (27) are arranged in series" as recited.

Regarding claim 18, in Albertson et al., "the pressure relief valve (27) is configured downstream of the rupture disk (17) from a high pressure side" as recited.

Regarding claim 20, in Albertson et al., "the pressure relief valve (27) is configured to vent a refrigerant of the compressor (inherent in the refrigerant circuit) to the atmosphere" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389).

Albertson et al. discloses the claimed invention except for "the pressure relief valve (being) configured to open at a lower opening pressure than a bursting pressure of the rupture disk.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the spring force of the relief valve 27 of Albertson et al., since it has been held that where the general conditions of a claim are disclosed as here in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 17, 21, 22, 23, 24, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Szwargulski (U. S. Pat. No. 3,520,330).

The patent to Albertson et al. discloses all the claimed features with the exception of having at the relief valve 27 a leak passage permitting limited flow across the otherwise closed valve.

The patent to Szwargulski discloses, in figures 1 and 2 for example, that it is known in the art to employ, at a relief valve 14, a leak passage, in the form of a porous valve head for the purpose of allowing limited fluid flow across the otherwise closed relief valve.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a porous valve head in the

relief valve 27 for the purpose of allowing limited fluid flow across the otherwise closed relief valve as recognized by Szwargulski.

In the resulting combination, the “exhaust chamber (is upstream of rupture disk 17 of Albertson et al.), and wherein the rupture disk (17) is pressurized on one side (e.g. the upstream side) with high pressure from the exhaust chamber and on the other side (e.g. the downstream side) with atmospheric pressure” allowed by now leaking relief valve 27 as recited in claim 17.

Regarding claim 21, in the device of the combination, “the pressure relief valve (at 27 would have) a defined leakage and wherein the rupture disk (at 17 of Albertson et al.) is hermetically sealed” as recited.

Regarding claim 22, in the device of the combination, “a space (such as at space 20 of Albertson et al. is) between the pressure relief valve (27) and the rupture disk (17), and wherein the defined leakage (taught by Szwargulski) is sufficient to prevent a pressure build up in the space (20) when the rupture disk (17) is intact” as recited.

Regarding claim 23, in the device of the combination, “the pressure relief valve (27 of Albertson et al.) includes a valve seat and a valve piston, wherein at least one of the valve seat and the valve piston includes a porous material (as taught by Szwargulski) so as to realize the defined leakage” as recited.

Regarding claim 26, in the device of the combination, “the pressure relief valve (27 of Albertson et al.) is configured to slowly release a residual refrigerant of the compressor through a predefined leak (as taught by Szwargulski) in response to the pressure in the air-conditioning system dropping below a set pressure”, the "set pressure" being that at which relief valve 27 opens, as recited.

Regarding claim 28, the device of the combination discloses a “safety device (generally taught by Albertson et al.) for a compressor in an air-conditioning system of a

motor vehicle, the safety device comprising: a rupture disk (17, Albertson et al.) in contact with a refrigerant of the air-conditioning system and configured to rupture when a pressure of the refrigerant exceeds a first predetermined pressure; and a pressure valve (relief valve 27) disposed in a closed position downstream of the rupture disk (17), and configured to open at a second predetermined pressure lower (based on the spring force of valve 27) than the first predetermined pressure so as to release refrigerant in the event of a rupture of the rupture disk (17), a predetermined leak (as taught by Szwargulski) being associated with the pressure valve (27) in the closed position so as to allow atmospheric pressure to contact a downstream side of the rupture disk (17) when the rupture disk (17) is intact and to allow a slow leak of the refrigerant when the rupture disk (17) is ruptured and when the pressure of the refrigerant is below the second predetermined pressure", the "second predetermined pressure" being that at which the relief valve opens, as recited.

Claim 21 is further, and claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson et al. (U. S. Pat. No. 5,577,389) in view of Focqueur (U. S. Pat. No. 4,532,768).

The patent to Albertson et al. discloses all the claimed features with the exception of having at the relief valve 27 a leak passage permitting limited flow across the otherwise closed valve.

The patent to Focqueur discloses, in figure 3 for example, that it is known in the art to employ, at a relief valve 40, a leak passage, in the form of a bypass groove at 39 in the valve seat for the purpose of allowing limited fluid flow across the otherwise closed relief valve.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Albertson et al. a bypass groove in the valve

seat of relief valve 27 for the purpose of allowing limited fluid flow across the otherwise closed relief valve as recognized by Focqueur.

Regarding claim 24, in the device of the combination, "the pressure relief valve (27 of Albertson et al.) comprises a valve seat, a valve piston, and further comprises at least one of a bypass groove (as taught by groove 39 of Focqueur), a bypass bore, and surface roughness or regularity at one of the valve seat and valve piston for realizing the define leakage" as recited.

Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Rivell/
John Rivell
Primary Examiner
Art Unit 3753

j.r.